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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/736,003	12/15/2003	Douglas R. Smith	132664	9002
7590	12/13/2005		EXAMINER	
John S. Beulick Armstrong Teasdale LLP Suite 2600 One Metropolitan Square St. Louis, MO 63102			HONG, JOHN C	
			ART UNIT	PAPER NUMBER
			3726	
DATE MAILED: 12/13/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/736,003	<b>Applicant(s)</b> SMITH ET AL.	
	<b>Examiner</b> John C. Hong	<b>Art Unit</b> 3726	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 19 September 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 1-6 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 7-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. Applicant's election with traverse of claims 7-20 in the reply filed on 9/19/05 is acknowledged. The traversal is on the ground(s) that the inventions are related and the search would not be relevant to the examiner. This is not found persuasive because the search of different classification would be a burden to the Examiner.

The requirement is still deemed proper and is therefore made FINAL.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 7-9 are rejected under 35 U.S.C. 102(b) as being anticipated by JP361065435.

'435 discloses a nozzle (4), comprising: a body comprising a first end, a second end, and a fluid passage extending therebetween, a first portion of said fluid passage having a first cross-sectional shape, and a second portion of the fluid passage having a second cross-sectional shape, the second cross-sectional shape selected such that fluid discharged from the second portion has a pre-selected cross-sectional discharge pattern, wherein a cross-sectional shape of the fluid passage transitions gradually from the first cross sectional shape to the second cross sectional shape, wherein the fluid passage extends an axial distance from at least one of the body first and second portion second ends towards the first portion (Abstract; Fig. 1).

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4. Claims 13-15, 19 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Miyano (U.S. Patent 4564431).

Miyano discloses a machining system (4) for machining a component, the machining system comprising: a tool (1) having an exterior shape for use in machining at least a portion of the exterior shape of the component (2), a component mounting fixture that holds the component during machining, and a coolant flow nozzle (16) comprising a body, a first end, a second end, and a fluid passage extending therebetween, a first portion of the fluid passage having a first cross-sectional shape, and a second portion of the fluid passage having a second cross-sectional shape (19), the second cross-sectional shape selected so that fluid discharged from the second portion has a pre-selected cross-sectional discharge pattern, wherein the cross-sectional shape of the flow nozzle fluid passage transitions gradually from the first cross-sectional shape to the second cross-sectional shape, wherein the flow nozzle second cross-sectional shape extends an axial distance at least partway between the nozzle first and second portions, wherein the coolant flow nozzle is removably coupled to a movable structure that holds the tool during machining such that the nozzle moves in tandem with the tool during machining of the component, and further comprising a second coolant flow nozzle (23) positioned to discharge cooling fluid towards the component during machining (Figs 1 and 2; col. 3, line 61-col. 5, line 20).

Regarding the component mounting fixture that holds the component during machining is an inherent part of the system, since without the mounting fixture the machining process would be impossible.

*Claim Rejections - 35 USC § 103*

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP361065435 in view of Weber (U.S. Patent 5029759).

‘435 teaches the limitation except the fluid passage is fabricated using a machining process,  
using an electro-discharge machining process and the nozzle is formed from at least one block of stock material.

Weber teaches the fluid passage is fabricated using a machining process,  
using an electro-discharge machining process and the nozzle is formed from at least one block of stock material (col.2, lines 42-47).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to employ the step of fabricating the fluid passage using a machining process, using an electro-discharge machining process and the nozzle is formed from at least one block of stock material, as taught by Weber on the nozzle of ‘435 so as to optimize the fuel flow from the nozzle.

7. Claims 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyano in view of Weber.

Miyano teaches the limitation except the coolant flow nozzle fluid passage is formed

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using a machining process, the coolant flow nozzle is formed from a single/a plurality of block material.

Weber teaches the fluid passage is fabricated using a machining process (col.2, lines 42-47).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to employ the step of fabricating the nozzle by machining process as taught by Weber so as to optimize the fuel flow from the nozzle.

Regarding the step of fabricating coolant flow nozzle from a single/a plurality of block material is well known in the art and It would have been obvious to one of ordinary skill in the art at the time the invention was made to employ these known method on the steps of Miyano/Weber so as to manufacture nozzles easily and economically.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John C. Hong whose telephone number is 571-272-4529. The examiner can normally be reached on M-F(07:00-16:30)First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bryant can be reached on 571-272-4526. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to be 'JCH', written in a cursive style.

John C. Hong  
Primary Examiner  
Art Unit 3726

jh  
December 08, 2005